

IN THE CLAIMS:

Please cancel claims 1-4 without prejudice or disclaimer and add the following new claims to the application.

5(New). A wire for arc welding manufactured by firstly drawing a wire material, heat treating the drawn wire material for work hardening it, secondary drawing the heat treated wire material, heat treating the secondary drawn wire material for removing internal residual stress of it, and finally drawing the heat treated wire material, wherein the final drawing step is carried successively out by a first die having a diameter reducing contact part of a smaller contact angle and a shorter bearing part for actually reducing a diameter of the wire to be worked, and a second die having a longer diameter correcting contact part than that of the first die for actually correcting the diameter of the wire, the second die being disposed in series with the first die, whereby a hardness difference between a central portion and an outer surface of the wire is less than 18 and a hardness difference between portions at intervals of 200mm in the longitudinal direction is less than 15, when the hardness of respective wire portions is measured by Vickers Hardness tester.

6(New). The wire for arc welding of the claim 5, wherein the differences of hardness values are adjusted to the values when wire contact area rate defined the following formula is limited within a range of 3 to 3.5:

wire contact area rate = a diameter reducing contact rate + a diameter correcting contact rate

diameter reducing contact rate = area of part for reducing a diameter of the wire/cross section area of the wire incoming into the first die

diameter correcting contact rate = area of the part for correcting a diameter of the wire/cross section area of the wire drawn from the second die.

4
7(New). A method for manufacturing a wire for arc welding, which comprises steps of firstly drawing a wire material, heat treating the drawn wire material for work hardening it, secondary drawing the heat treated wire material, heat treating the secondary drawn wire material for removing internal residual stress of it, and finally drawing the heat treated wire material, wherein the final drawing step includes steps of reducing a hardness difference in a radial direction of the wire using a first die having an area reduction contact part of a smaller contact angle and a shorter bearing part, and reducing a hardness difference in a longitudinal direction of the wire using a second die having a longer diameter correcting contact part than that of the first die and being disposed in series with the first die.
